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### **EDUCATION:**

2000 Ph.D. University of California at Santa Cruz, Santa Cruz, CA  
Earth Sciences Department, Concentrations: Coastal Geology and Oceanography

1996 B.Sc. University of Delaware, Newark, DE  
Geology Department, Concentrations: Geomorphology and Sedimentology

### **RESEARCH EXPERIENCE:**

2002-present Research Geological Oceanographer  
Coastal and Marine Geology Program, US Geological Survey

2002-present Research Associate  
Institute for Marine Sciences, University of California at Santa Cruz

2002-2004 Research Fellow  
Partnership for Interdisciplinary Studies of Coastal Oceans Consortium

2000-2002 Post-doctoral Researcher  
Institute for Marine Sciences, University of California at Santa Cruz

1996-2000 Graduate Student Researcher  
Earth Sciences Department, University of California at Santa Cruz

### **RESEARCH INTERESTS:**

- Coral reef and rocky shoreface morphology, hydrodynamics, sediment distribution and the resulting modes of sediment transport
- The influence of coastal hydrodynamics on nearshore rock and reef biologic communities
- The interplay between geologic structure, climatic fluctuations and coastal processes
- The influence of extreme storm events on the geomorphic evolution of coastlines
- High-resolution oceanographic instrumentation and coastal mapping techniques

### **PUBLICATIONS:**

Buscombe, D., Rubin, D.M., Lacy, J.R., Sherwood, C.R., Storlazzi, C.D., Hatcher, G., Chezar, H., and Wyland, R., in review. "Seabed dynamics on the inner continental shelf: Insights from eighteen months of hourly grain-size measurements" *Continental Shelf Research*

Davis, A., Muller, C., Kvitek, R., Storlazzi, C.D., Phillips, E., in review. "A regional analysis of the distribution of rippled scour depressions along the California coast" *Continental Shelf Research*

Erikson, L.H., Storlazzi, C.D., and Collins, B.D., in review. "Influence of the decreased seasonal ice pack extent on wave run-up in the Eastern Chukchi Sea" *Arctic Journal*

Ferrario, F., Beck, M.W., Storlazzi, C.D., Micheli, F., Shepard, C.C., Airolidi, L., in review. Coral reefs are effective for coastal hazard risk reduction. *Proceedings of the National Academy of Sciences*.

Grady, A.E., Moore L.J., Storlazzi, C.D., Elias, E., Reidenbach M.A., in review. The influence of sea-level rise and changes in fringing reef morphology on gradients in alongshore sediment transport, *Geophysical Research Letters*.

Rogers, J.S., Monismith, S.G., Feddersen, F., and Storlazzi, C.D., in review. "Hydrodynamics of spur and groove formations on a fringing coral reef" *Journal of Geophysical Research–Oceans*

Demartini, E., Jokiel, P., Beets, J., Stender, Y., Minton, D., Conklin, E., and Storlazzi, C., accepted. "Terrigenous sediment impact on coral recruitment and growth affects the use of coral habitat by recruit parrotfishes (F. Scaridae)" *Journal of Coastal Conservation*

Hoeke, R.K., Storlazzi, C.D., and Ridd, P.V., accepted. "Circulation and flushing of a fringing coral reef embayment: A coupled hydrodynamic model study." *Continental Shelf Research*

Conaway, C.H., Storlazzi, C.D., Draut, A.E., and Swarzenski, P.W., 2013. "Short-term variability of <sup>7</sup>Be atmospheric deposition and watershed response in a Pacific coastal stream, Monterey Bay, California, USA" *Journal of Environmental Radioactivity*, v. 120, p. 94-103.

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Conaway, C.H., Draut, A.E., Echols, K.R., Storlazzi, C.D., and Ritchie, A., 2012. "Episodic suspended-sediment transport and elevated polycyclic aromatic hydrocarbons in a small, mountainous river in coastal California" *River Research and Applications*, p. 1-14, DOI: 10.1002/rra.2582

Field, M.E., Chezar, H., Storlazzi, C.D., 2012. "SedPods: A low-cost coral proxy for measuring net sedimentation" *Coral Reefs*, v. 32, p. 155-159, DOI: 10.1007/s00338-012-0953-5

Swarzenski, P.W., Dailer, M.L., Glenn, C.R., Smith, C.G., and Storlazzi, C.D., 2012. "A geochemical and geophysical assessment of coastal groundwater discharge at select sites in Maui and Oahu, Hawaii." *Groundwater in the Coastal Zones of the Asia Pacific*, p. 1-36.

Erikson, L.H., Storlazzi, C.D., and Jensen, R.E., 2011. "Wave climate and trends along the eastern Chukchi Arctic Alaska coast." *Solutions to Coastal Disasters 2011*, p. 273-285. DOI: 10.1061/41185(417)25.

Field, M.E., Ogston, A.S., and Storlazzi, C.D., 2011. "Rising sea level may cause decline of fringing coral reefs." *EOS*, Transactions of the American Geophysical Union, v. 92(33), p. 273-274.

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Storlazzi, C.D., Fregoso, T.A., Golden, N.E., and Finlayson, D.P., 2011. "Sediment dynamics and the burial and exhumation of bedrock reefs along an emergent coastline as elucidated by repetitive sonar surveys: Northern Monterey Bay, CA." *Marine Geology*, v. 289, p. 46-59. DOI: 10.1016/j.margeo.2011.09.010

Storlazzi, C.D., Elias, E., Field, M.E., and Presto, M.K., 2011. "Numerical modeling of the impact of sea-level rise on fringing coral reef hydrodynamics and sediment transport." *Coral Reefs*, v. 30(1), p. 83-96. DOI: 10.1007/s00338-011-0723-9.

Storlazzi, C.D., Field, M.E., and Bothner, M.H., 2011. "The use (and misuse) of sediment traps in coral reef environments: Theory, observations, and suggested protocols." *Coral Reefs*, v. 30, p. 23-38. DOI: 10.1007/s00338-010-0705-3.

Storlazzi, C.D., Field, M.E., Elias, E., and Presto, M.K., 2011. "The influence of sea-level rise on fringing reef sediment dynamics: Field observations and numerical modeling", in Rosati, J.D., Wang, P., and Roberts, T.M., eds., *Proceedings of the Coastal Sediments 2011*, v. 1: Hackensack, N.J., World Scientific Publishing, p. 244-257.

Cronin, K., van Ormondt, M., Storlazzi, C.D., Presto, M.K., and Tonnon, P.K., 2011. "Nearshore disposal of fine-grained sediment in a high-energy environment: Santa Cruz Harbor case study", in Rosati, J.D., Wang, P., and Roberts, T.M., eds., *Proceedings of the Coastal Sediments 2011*, v. 1: Hackensack, N.J., World Scientific Publishing, p. 616-627.

Storlazzi, C.D., and Reid, J.A., 2010. "The influence of El Niño-Southern Oscillation (ENSO) cycles on wave-driven sea-floor sediment mobility along central California continental margin." *Continental Shelf Research*, v. 30, p. 1582-1599.

Peery, M.Z., Newman, S.H., Storlazzi, C.D., and Beissinger, S.R., 2009. "Meeting reproductive demands in a dynamic upwelling system: foraging strategies of a pursuit-diving seabird, the Marbled Murrelet." *The Condor*, v. 111(1), p. 120-134.

Draut, A.E., Bothner, M.H., Reynolds, R.L., Field, M.E., Cochran, S.A., Logan, J.B., Storlazzi, C.D., and Berg, C.J., 2009. "Supply and dispersal of seasonal flood deposits in Hanalei Bay,

Kaua'i, HI, USA: Implications for coral-reef ecosystems." *Geological Society of America Bulletin*, v. 121(3-4), p. 574-585.

Storlazzi, C.D., Field, M.E., Bothner, M.H., Presto M.K., and Draut, A.E., 2009. "Controls on sediment dynamics in a coral reef embayment: Hanalei Bay, Kauai." *Marine Geology*, v. 264, p. 140-151.

Revell, D.L., Barnard, P.L., Mustain, N., and Storlazzi, C.D., 2008. "The influence of harbor construction on downcoast beach morphologic evolution: Santa Barbara, CA." *Solutions to Coastal Disasters 2008*, p. 630-642.

Storlazzi, C.D. and Jaffe, B.E., 2008. "The relative contribution of processes driving variability in flow, shear, and turbidity over a fringing coral reef: West Maui, Hawaii" *Estuarine Coastal and Shelf Science*, v. 77(4), p. 549-564.

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Vitousek, S., Fletcher, C.H., Merrifield, M.A., Pawlak, G., Storlazzi, C.D., 2007. "Model scenarios of shoreline change at Kaanapali Beach, Maui, Hawaii: Seasonal and extreme events" *Coastal Sediments 2007*, v. 2, p. 1227-1240.

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Bothner, M.H., Reynolds, R.L., Casso, M.A., Storlazzi, C.D. and Field, M.E., 2006. "Quantity, composition and source of sediment collected in sediment traps along the fringing coral reef off Molokai, Hawaii" *Marine Pollution Bulletin*, v. 52(9), p. 1034-1047.

Presto, M.K., Ogston, A.O., Storlazzi, C.D., Field, M.E., 2006. "Temporal and spatial variability in the flow and dispersal of suspended-sediment on a fringing reef flat, Molokai, Hawaii" *Estuarine Coastal and Shelf Science*, v. 67, p. 67-81.

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Adams, P.N., Storlazzi, C.D., and Anderson, R.S., 2005. "Nearshore wave-induced cyclical flexing of seacliffs" *Journal of Geophysical Research-Earth Surface*, v. 110, F02002, DOI:10.1029/2004JF000217.

McManus, M.A., Cheriton, O.M., Drake, P.J., Holliday, D.V., Storlazzi, C.D., Greenlaw, C.E., and Donaghay, P.L., 2005. "Thin layers and the transport and retention of marine plankton in coastal systems" *Marine Ecology Progress Series*, v. 301, p. 199-215.

Drake, P., McManus, M.A., and Storlazzi, C.D., 2005. "Local wind forcing of the Monterey Bay area inner shelf" *Continental Shelf Research*, v. 25, p. 397-417.

Storlazzi, C.D., Ogston, A.S., Bothner, M.H., Field, M.E., and Presto M.K., 2004. "Wave- and tidally-driven flow and sediment flux across a fringing coral reef: South-central Molokai, Hawaii" *Continental Shelf Research*, v. 24(12), p. 1397-1419.

Ogston, A.S., Storlazzi, C.D., Field, M.E. and Presto, M.K., 2004. "Currents and suspended sediment transport on a shallow reef flat: South-central Molokai, Hawaii" *Coral Reefs*, v. 23, p. 559-569.

Engels, M.S., Fletcher, C.H., Field, M.E., Storlazzi, C.D., Grossman, E.E., Rooney, J.B., Conger, C.L., and Glenn, C., 2004. "Holocene reef accretion: southwest Molokai, Hawaii" *Journal of Sedimentary Research*, v. 74(2), p. 255-269.

Storlazzi, C.D., Logan, J.B., and Field, M.E., 2003. "Quantitative morphology of a fringing reef tract from high-resolution laser bathymetry: Southern Molokai, Hawaii" *Geological Society of America Bulletin*, v. 115, no. 11, p. 1344-1355.

Storlazzi, C.D., McManus, M.A., and Figurski, J.D., 2003. "Long-term high-frequency ADCP and temperature measurements along central California: Insights into upwelling and internal waves on the inner shelf" *Continental Shelf Research*, v. 23, p. 901-918.

Storlazzi, C.D., Field, M.E., Dykes, J.D., Jokiel, P.L., and Brown, E., 2002. "Wave Control on Reef Morphology and Coral Distribution: Molokai, Hawaii" *WAVES 2001 Conference Proceedings*, American Society of Civil Engineers, San Francisco, California, v. 1, p. 784-793.

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Storlazzi, C.D. and Field, M.E., 2000. "Sediment distribution and transport along a rocky, embayed coast: Monterey Peninsula and Carmel Bay, California" *Marine Geology*, v. 170, no. 3-4, p. 289-316.

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Storlazzi, C.D., Willis, C.M., and Griggs, G.B., 2000. "Comparative impacts of the 1982-83 and 1997-98 El Niño winters on the central California coast" *Journal of Coastal Research*, v. 17, no. 4, p. 1022-1036.

Benumof, B.T., Storlazzi, C.D., Seymour, R.J., and Griggs, G.B., 2000. "The relationship between incident wave energy and seacliff erosion rates: San Diego County, California" *Journal of Coastal Research*, v. 17, no. 4, p. 1162-1178.

Field, M.E., Storlazzi, C.D., Calhoun, R.S., and Cochran, S.A., 2000. "Sedimentation patterns on the fringing reef off southern Moloka'i, Hawai'i" *Proceedings of the National Beach Preservation Conference 2000*, American Shore and Beach Preservation Association, August 2000, Kaanapali, Maui, Hawai'i, p. 67-69.

Ogston, A.S., Storlazzi, C.D., and Field, M.E., 2000. "Observations of physical processes and sediment transport on a shallow reef flat: South-central Moloka'i, Hawai'i" *Proceedings of the National Beach Preservation Conference 2000*, American Shore and Beach Preservation Association, August 2000, Kaanapali, Maui, Hawai'i, p. 86-88.

Storlazzi, C.D., Field, M.E., Anima, R., and Tait, J.F., 1999. "The influence of tectonics and sea level fluctuations on sediment distribution and modes of littoral transport along the rocky inner shelf of central California" *Proceedings of the International Geological Correlation Program #437 – Coastal Environmental Change During Sea-Level Highstands Conference*, November 1999, Honolulu, Hawaii, p. 205-206.

Hapke, C., Gibbs, A., Richmond, B., Hampton, M., Jaffe, B., Dingler, J., Sallenger, A., Benumof, B., Brown, K., Griggs, G., Moore, L., Scholar, D., Storlazzi, C., Krabill, W., Swift, R., Brock, J., 1998. "A Collaborative program to investigate the impacts of the 1997-98 El Niño winter along the California coast" *Shore and Beach*, v. 66, no. 3, p. 24-32.

Storlazzi, C.D. and Griggs, G.B., 1998. "The 1997-98 El Niño and erosion processes along the central coast of California" *Shore and Beach*, v. 66, no. 3, p. 12-17.

#### **PEER-REVIEWED SCIENTIFIC REPORTS:**

Berkowitz, P., Storlazzi, C.D., Courtot, K.N., Krause, C.M., and Reynolds, M.H., 2012. Sea-level rise and wave-driven inundation models for Laysan Island, *Chapter 2 of Reynolds, M.H., Berkowitz, P., Courtot, K.N., and Krause, C.M., eds., Predicting sea-level rise vulnerability of terrestrial habitat and wildlife of the Northwestern Hawaiian Islands*. U.S. Geological Survey Open-File Report 2012-1182, p. 72-126, <http://pubs.usgs.gov/of/2012/1182/>

Erikson, L.H., Gibbs, A.E., Richmond, B.M., Storlazzi, C.D., and Jones, B.M., 2012. Modeling arctic barrier island-lagoon system response to projected arctic warming. Arctic Landscape Conservation Cooperative Progress Report, 23 p.,

<http://arcticlcc.org/projects/geophysical/barrier-island-lagoon-systems/>

Merrifield, M.A., and 27 others, 2012. Sea Level and Coastal Inundation on Pacific Islands. *In* Marra, J.J., Keener, V.W., Finucane, M.L., Spooner, D., Smith, M.H. (eds.). *Climate Change and Pacific Islands: Indicators and Impacts. Report for The 2012 Pacific Islands Regional Climate Assessment (PIRCA)*. Honolulu, Hawai‘i, USA, p. 58-79.

Parker, B., and 39 others, 2012. Marine, Freshwater, and Terrestrial Ecosystems on Pacific Islands, *In* Marra, J.J., Keener, V.W., Finucane, M.L., Spooner, D., Smith, M.H. (eds.). *Climate Change and Pacific Islands: Indicators and Impacts. Report for The 2012 Pacific Islands Regional Climate Assessment (PIRCA)*. Honolulu, Hawaii, USA, p. 80-101.

Presto, M.K., Storlazzi, C.D., Logan, J.B., Reiss, T.E., and Rosenberger, K.J., 2012. “Coastal circulation and potential coral-larval dispersal in Maunalua Bay, O‘ahu, Hawaii—Measurements of waves, currents, temperature, and salinity, June–September 2010.” U.S. Geological Survey Open-File Report 2012-1040, 67 p., <http://pubs.usgs.gov/of/2012/1040/>

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Storlazzi, C.D. and Presto, M.K., 2005. “Coastal Circulation and Water Column Properties along Kaloko-Honokohau National Historical Park, Hawaii. PART I: Measurements of waves, currents, temperature, salinity and turbidity: April-October 2004” *USGS Open-File Report 2005-1161*, 30 p. <http://pubs.usgs.gov/of/2005/1161/>

Storlazzi, C.D. and Presto, M.K., 2005. “Coastal Circulation and Sediment Dynamics along West Maui, Hawaii, PART IV: Measurements of waves, currents, temperature, salinity and turbidity in Honolua Bay, Northwest Maui: 2003-2004” *USGS Open-File Report 2005-1068*, 34 p. <http://pubs.usgs.gov/of/2005/1068/>

Storlazzi, C.D., Field, M.E., Ogston, A.S., Logan, J.B., Presto, M.K. and Gonzales, D.G., 2004. “Coastal Circulation and Sediment Dynamics along West Maui, Hawaii, PART III: Flow and particulate dynamics during the 2003 summer coral spawning season” *USGS Open-File Report 2004-1287*, 36 p. <http://pubs.usgs.gov/of/2004/1287/>

Storlazzi, C.D., Russell, M.A., Owens, M.D., Field, M.E. and Murphy, L.E., 2004. "Dynamics of the Physical Environment at the USS *Arizona* Memorial: 2002-2004" *USGS Open-File Report 2004-1353*, 28 p. <http://pubs.usgs.gov/of/2004/1353/>

Hatcher, G.A., Reiss, T.E. and Storlazzi, C.D., 2004. "Application of GPS drifters to track Hawaiian coral spawning" *USGS Open-File Report 2004-1309*, 14 p. <http://pubs.usgs.gov/of/2004/1309/>

Storlazzi, C.D., Logan, J.B., McManus, M.A., and McLaughlin, B.E., 2003. "Coastal Circulation and Sediment Dynamics along West Maui, Hawaii, PART II: Hydrographic Survey Cruises A-3-03-HW and A-4-03-HW Report on the spatial structure of currents, temperature, salinity and turbidity along Western Maui" *USGS Open-File Report 03-430*, 50 p. <http://pubs.usgs.gov/of/2003/of03-430/>

Storlazzi, C.D. and Jaffe, B.E., 2003. "Coastal Circulation and Sediment Dynamics along West Maui, Hawaii, PART I: Long-term measurements of currents, temperature, salinity and turbidity off Kahana, West Maui: 2001-2003" *USGS Open-File Report 03-482*, 28 p. <http://pubs.usgs.gov/of/2003/of03-482/>

#### **INVITED LECTURES:**

"Watershed and Climate Change Impacts to High Island Fringing Reefs." Marine Laboratory, University of Guam, 08/2012.

"Watershed Influences and Potential Climate Change Impacts to US Fringing Coral Reefs." School of Earth and Environment, University of Western Australia, 07/2012.

"Nearshore Morphology, Benthic Habitats, Hydrodynamics, and Coastal Groundwater Discharge Near Kahekili Beach Park, Maui, Hawaii." Environmental Protection Agency, 03/2012.

"Understanding the Residence Time and Advection of Fluvial Sediment out of a Coral Reef-lined Embayment." Environmental Fluid Mechanics Laboratory, Stanford University, 11/2011.

"Observations and Modeling of Habitat Stability on the California Continental Shelf and Its Implications on Benthic Ecosystems." Bodega Marine Laboratory, University of California at Davis, 10/2011.

"Predicting the Impact of Storm Waves and Sea-level Rise Within the Papahānaumokuākea Marine National Monument." USGS Pacific Islands Ecosystems Research Center, 09/2011.

"The Dynamics of Fine-Grained Sediment Dredged from Santa Cruz Harbor." Environmental Protection Agency, 06/2011.

"The Dynamics of Fine-Grained Sediment Dredged from Santa Cruz Harbor." US Army Corps of Engineers, 06/2011.

“Nearshore disposal of fine-grained sediment in a high-energy environment” California and the World’s Ocean 2010 Conference, 09/2010

“Climate change impacts to US coral reefs.” US Army Corps of Engineers and NOAA-Pacific Climate Information System Programs, 07/2010

“Circulation and sediment dynamics in Maunalua Bay, Oahu.” The Nature Conservancy, Hawaii Marine Program, 06/2010

"USGS's investigations of terrestrial impacts to and marine processes in northern Monterey Bay." Monterey Bay National Marine Sanctuary’s Research Activities Panel Meeting, 03/2010

“Development of and Land-Based Threats to Coral Reefs" University of California at Santa Cruz, Biology Department, 02/2010

“Observations and Modeling of Habitat Stability on the Central California Continental Shelf.” California State University, Moss Landing Marine Laboratory, 02/2010

“Seabed Instability.” University of California at Santa Cruz, Earth Sciences Department, 10/2009

“Observations and Modeling of the Spatial and Temporal Scales of Sediment Mobility on the Continental Shelf.” NOAA Southwest Fisheries Science Center, 06/2009

“Land-based Threats to Coral Reefs.” Cabrillo College, Natural and Applied Science Division, 05/2009

“Observations and Modeling of the Spatial and Temporal Scales of Sediment Mobility on the Continental Shelf.” NOAA Center for Coastal Fisheries and Habitat Research, 04/2009

“Geologic and Oceanographic Processes that Control the Formation of Bar-built Estuaries.” California Regional Water Quality Control Board science staff, 04/2009

“USGS efforts to understand circulation and sediment dynamics in Maunalua Bay, Oahu” US Coral Reef Task Force, Hawaiian Local Action Strategy, 03/2009

“An Overview of the Coastal and Marine Geology Program’s Coral Reef Project and Its Current Research in Maunalua Bay, Oahu.” USGS Pacific Islands Water Science Center, 02/2009

“The Influence of Climate Change on Coastal Processes and Benthic Habitats: Past Observations, Present Modeling, and Future Projections.” US Fish and Wildlife Service and US Geological Survey’s “Climate Change, Natural Resources, and Coastal Management Workshop”, 01/2009

“Geologic and Oceanographic Processes that Control the Formation of Bar-built Estuaries.” Pescadero Marsh Restoration Forum, 12/2008

"USGS's Brown-2-Blue studies: Investigating terrestrial impacts on northern Monterey Bay's coastal waters." Monterey Bay National Marine Sanctuary's Research Activities Panel Meeting, 11/2008

Presented USGS Coral Reef Project results to USGS Associate Director Suzette Kimball, 07/2008

"Possible Issues with Mining Sediment from Submarine Canyons for Beach Restoration", Monterey Bay National Marine Sanctuary's Research Activities Panel Meeting, 05/2008

"Geologic and Oceanographic Processes at Pleasure Point, California." California Coastal Commission, 06/2007

"Coastal Erosion Processes Along Central California." Davenport Geological Society, 06/2007

"El Niño-Southern Oscillation (ENSO) Events and Coastal Erosion Processes Along Central California." California State University, Moss Landing Marine Laboratory, 02/2006

"The Role of Active Processes in Habitat Studies." National Marine Fisheries Service-University of California at Santa Cruz-US Geological Survey's "Fisheries Science Coordination Meeting", 07/2005

"Variability in Oceanographic and Meteorologic Forcing along Central California and its Implications on Nearshore Processes." University of California at Santa Cruz, Institute of Marine Sciences, 11/2004

"Variability in Oceanographic and Meteorologic Forcing along Central California and its Implications on Nearshore Physical and Biologic Processes." National Marine Fisheries Service, Pacific Fisheries Environmental Laboratory, 05/2004

"Life and Death of Hawaiian Coral Reefs." U.S. Geological Survey's Western Region Public Lecture Series, 02/2004

"The Influence of Physical Processes on Coral Reefs: Insights from West Maui, Hawaii." University of California at Santa Cruz, Earth Sciences Department, 11/2003

Presented USGS Coral Reef Project results to USGS Director Charles Groat, 10/2003

"Sediment Dynamics on Hawaiian Reefs: Insights from Southern Molokai, Hawaii." Stanford University, Department of Geological and Environmental Sciences, 03/2003

"Application of Mapping to Sediment Dynamics Studies and Habitat Analysis on Rocky Inner Shelves." U.S. Geological Survey, Western Region Coastal and Marine Geology Team, 07/2002

"Sediment Dynamics on Hawaiian Reefs: Insights from Southern Molokai, Hawaii." U.S. Geological Survey, Western Region Coastal and Marine Geology Team, 06/2002

“Wave Control on Coral Distribution and Fringing Reef Morphology: Southern Molokai, Hawaii.” University of Delaware, Institute of Marine Sciences and Department of Geology, 05/2002

“Wave Control on Coral Distribution and Fringing Reef Morphology: Southern Molokai, Hawaii.” University of California at Santa Cruz, Institute of Marine Sciences, 05/2002

“Cool Tools in Physical Oceanography” University of California’s Seymour Marine Discovery Center, 04/2002

“Long-term High-frequency ADCP and Temperature Measurements Along Central California: Insights into Upwelling and Internal Waves on the Inner Shelf.” University of California at Santa Cruz, Institute of Marine Sciences, 11/2001

“Coastal Hazards and Processes along the Monterey Peninsula and Carmel Bay, CA” Carmel, CA, city council and land use planners, 04/2001

"El Niño-Southern Oscillation (ENSO) Events and Coastal Erosion Processes along Central California." American Geophysical Union 2000 Fall Meeting, Ocean Sciences Section, Special Session OS-22: Linking Climate Variability and Coastal Processes, 12/2000

#### **MEETINGS OR WORKSHOPS CHAIRED:**

- 12<sup>th</sup> International Coral Reef Symposium, Watershed Management and Reef Pollution Session, 2012 (co-chair)
- Impacts of Climate Change to the Central California Coast: Expert meeting on sea-level rise and storms, 2012 (chair)
- 15<sup>th</sup> International Ocean Sciences Meeting, Synergistic Interactions Between Stressors to Coral Reefs Session, 2010 (chair)
- 15<sup>th</sup> International Ocean Sciences Meeting, Physical Processes on Coral Reefs and Their Role in Reef Dynamics Session, 2010 (co-chair)
- 15<sup>th</sup> International Ocean Sciences Meeting, Geomorphic Process and Modeling of Rocky and Bluffed Coasts Session, 2010 (co-chair)
- Monterey Bay National Marine Sanctuary’s Research Activities Panel Spring Meeting, 2010 (chair)
- 11<sup>th</sup> International Coral Reef Symposium, Hydrodynamics of Coral-Reef Systems Session, 2008 (co-chair)
- Monterey Bay National Marine Sanctuary’s Research Activities Panel Fall Meeting, 2008 (chair)
- 1<sup>st</sup> Monterey Bay Research Consortium’s Central California Environmental Modeling Workshop, 2007 (co-chair)
- 6<sup>th</sup> International Symposium on Coastal Sediments, Seafloor Mapping Session, 2007 (co-chair)
- 13<sup>th</sup> International Ocean Sciences Meeting, Environmental Change and Its Impact on Coral Reefs Session, 2006 (chair)
- Monterey Bay National Marine Sanctuary’s Research Activities Panel Fall Meeting, 2006 (chair)

- 10<sup>th</sup> International Coral Reef Symposium, The Influence of Storms and Floods on Coral Reef Development Session, 2004 (co-chair)
- 11<sup>th</sup> Pacific Congress on Marine Science and Technology, Hydrodynamics of Coastal Waters Session, 2001 (co-chair)

#### **SCIENTIFIC REVIEW PANELS:**

- US Coral Reef Task Force, Hawaiian Local Action Strategy to Reduce Land-based Pollution Threats to Coral Reefs, 2004-present
- NOAA, Monterey Bay National Marine Sanctuary, coastal geology representative (primary) to the Research Activities Panel, 2005-present
- US Global Change Research Program 2013 National Climate Assessment, Pacific Islands Regional Climate Assessment, Sea Level and Coastal Inundation on Pacific Islands, 2010-present
- NOAA, West Coast National Marine Sanctuary Program, Ecosystem-Based Management Working Group, 2010-present
- US Global Change Research Program 2013 National Climate Assessment, Pacific Islands Regional Climate Assessment, Impacts to Marine, Freshwater, and Terrestrial Ecosystems, 2012-present
- US Army Corps of Engineers, Santa Cruz Harbor Dredge Disposal Working Group, 2008-2011
- NOAA, Coastal and Marine Ecological Classification Standards, Pacific/Arctic Working Group, 2011
- US Geological Survey Pacific Coastal and Marine Science Center 2011-2020 Science Planning Team, 2010-2011
- City of Santa Cruz, Seawater Desalination Plant Technical Working Group, 2009-2011
- State of California, Pescadero Lagoon Working Group, 2007–2010
- NOAA Marine Protected Area (MPA) and Integrated Ocean Observing System (IOOS) Task Team, 2010
- US Geological Survey Western Coastal and Marine Geology Team Habitats and Ecosystem Studies Assessment (chair), 2010
- State of California and Monterey Bay National Marine Sanctuary, Central California Halibut Trawl Fishery Working Group, 2010
- US Geological Survey, National Climate Change and Wildlife Science Center Proposals, 2010
- NOAA, Monterey Bay National Marine Sanctuary 2009 Condition Report, 2009
- US Geological Survey, National Climate Change and Wildlife Science Center Proposals, 2009
- US Geological Survey, Eastern Region Coral Reef Science 5-year Project Review, 2009
- State of California Department of Transportation, Scott and Waddell Creek Bridge Replacement/Lagoon Restoration Working Group, 2007–2009
- US Geological Survey, Pacific Southwest Area Integrated Science Workshop on Climate Change, Coastal and Marine Geology Program representative, 2008
- California Department of Boating and Waterways and Santa Cruz County Redevelopment Agency, Pleasure Point Geologic and Oceanographic Processes Technical Working Group, 2005-2008
- US National Park Service and Commonwealth of the Northern Marianas Island's Coastal Resources Management Office, Coastal erosion at American Memorial Park, Saipan, CNMI, 2007
- NOAA, Joint Management Plan for the Cordell Bank, Gulf of the Farallones, and Monterey

- Bay National Marine Sanctuaries, 2006-2007
- NOAA, Undersea Research Program, Undersea Research on Tropical and Subtropical Marine Ecosystems, 2005
- NOAA, Monterey Bay National Marine Sanctuary, coastal geology representative (alternate) to the Research Activities Panel, 2004-2005
- Hawaiian Department of Natural Resources/Hawaiian Department of Aquatic Resources/University of Hawaii, Hawaii Coral Reef Initiative Research Program, 2004
- Natural Environment Research Council, Physical Oceanography Programme (U.K.), 2004
- National Parks Service, Pacific Islands Coral Reef Program, 2003
- US Geological Survey, Bureau-wide Coral Reef Science 10-year Planning Meeting, 2002
- NOAA, Monterey Bay National Marine Sanctuary 5-year Planning Committee, 2000

### **HONORS AND AWARDS:**

- USGS Star Award, for outstanding performance of scientific duties, 2012
- Wave and sea-level rise impacts to atolls research noted as a research highlight at the American Geophysical Union 2012 Fall meeting (<http://blogs.agu.org/geospace/2012/12/05/new-model-of-sea-level-rise-accounts-for-splash-in-the-bath/>), 2012
- Wave and sea-level rise impacts to atolls research noted as a research highlight on Storify (<http://storify.com/barbarawilcox/new-research-underscores-vulnerability-of-wildlife>), 2012
- USGS Coral Reef Project sediment dynamics research was highlighted in the 2011 book, Encyclopedia of Modern Coral Reefs: Structure, Form, and Process (David Hopely, ed.; DOI 10.1007/978-90-481-2639-2). The authors wrote, “*Recent research...by the USGS has set the bar for sediment research in coral environments.*”
- USGS Star Award, for outstanding performance of scientific duties, 2011
- Research on sea-level rise impacts to atolls noted as a research highlight by Environment Hawaii (vol. 22, no. 3, pg. 4), 2011
- USGS Star Award, for outstanding performance of scientific duties, 2010
- USGS SIM 3007 (“Views of the Seafloor in Northern Monterey Bay, California”) selected by the USGS to represent USGS science at the 2010 ESRI International User Conference, 07/2010
- USGS SIR 2007-5101 (“The Coral Reef of South Moloka’i, Hawai’i—Portrait of a Sediment Threatened Fringing Reef”) sent by the USGS Office of Communications and USGS Director Suzette Kimball to 33 State Senators and Representative that make up the Senate Committees on the (1) Energy and Environment, and (2) Water, Land, Agriculture, and Hawaiian Affairs, and the House Committees on (3) Energy and Environmental Protection, and (4) Water, Land, and Ocean Resources, 08/2009
- USGS SIR 2007-5101 (“The Coral Reef of South Moloka’i, Hawai’i—Portrait of a Sediment Threatened Fringing Reef”) selected as Association of Earth Science Editors’ Outstanding Publication of 2009 (print category), 07/2009
- USGS SIR 2007-5101 (“The Coral Reef of South Moloka’i, Hawai’i—Portrait of a Sediment Threatened Fringing Reef”) awarded the National Association of Government Communicator’s Blue Pencil Award of Excellence for 2009 (technical communication), 04/2009
- USGS SIM 3007 (“Views of the Seafloor in Northern Monterey Bay, California”) nominated for Shoemaker Communications Award, 04/2009

- USGS SIR 2007-5101 (“The Coral Reef of South Moloka’i, Hawai’i—Portrait of a Sediment Threatened Fringing Reef”) nominated for Shoemaker Communications Award, 04/2009
- USGS SIR 2007-5101 honored by Hawaii State Senate and House of Representatives as Concurrent Resolution #2009-0916 SCR SMA-1, 03/2009
- “Reversing Coral Reef Decline in Hawai’i -- A New Look at a Critical Problem” describing the release of USGS SIR 2007-5101 featured on the USGS Homepage (<http://www.usgs.gov/>), 11/2008
- USGS Star Award, for service, leadership, and team citizenship, 2008
- War-in-the-Pacific NHP joint USGS-NPS research program highlighted by USGS Director Myers in Sea Technology (January 2008 issue, pg. 31), 2008
- USGS Star Award, for service, leadership, and team citizenship, 2007
- USGS Star Award, for outstanding performance of scientific duties, 2006
- USGS Star Award, for service, leadership, and team citizenship, 2006
- “Coral Reefs and Sea-Level Rise Don’t Mix” presentation designated a USGS “Science Pick” of the month in March by the USGS National Center’s Communication Office, 2006
- Pleasure Point Project noted as a Ocean Research highlight by Sea Technology (September 2006 issue, pg. 61), 2006
- USGS Star Award, for service and leadership, 2005
- USGS Star Award, for service and team citizenship, 2004
- USGS Star Award, for RGE Panel service, 2004
- West Maui Coastal Circulation Experiment noted as a news highlight by the Marine Pollution Bulletin (vol. 46, pg. 931), 2003
- West Maui Coastal Circulation Experiment designated a USGS “Science Pick” of the month in July and August by the USGS National Center’s Communication Office, 2003
- “USGS Help Monitor the *USS Arizona* Memorial” highlighted in the April issue of *People, Land and Water*, the news magazine of the US Department of the Interior, 2003
- American Geological Institute’s “Highlight of the Year Issue” designation in Solid Earth (Geomorphology) Section for Storlazzi and Griggs (2000) *GSA Bulletin* paper, 2000
- David and Lucile Packard Foundation Postdoctoral Research Fellowship, 2000-2001
- Graduate Assistance in Areas of National Needs Fellowship, 1999
- Tuition Fellowship, University of California, Santa Cruz, 1996
- Regents’ Fellowship, University of California, Santa Cruz, 1996
- National Collegiate Natural Science Award, 1994, 1995

#### **EXTERNAL FUNDING:**

2013-2014: US Fish and Wildlife Service, Pacific Islands Climate Change Cooperative. “*Future Wind and Wave Projections for NPS- and USFWS-managed Islands in the Pacific Ocean*” \$75,500 (Principal Investigator)

2013-2014: State of Hawaii Department of Health “*Reducing Excessive Sedimentation in the Hakioawa Watershed of Kaho’olawe Island by Restoring Native Ecosystems*” \$204,200 (Co-principal Investigator)

2011-2013: US National Park Service, Inventory & Monitoring (I&M) Program. “*Coastal circulation and water-column properties at War-in-the-Pacific National Historical Park (WAPA)*” \$188,000 (Principal Investigator)

2011-2013: US Fish and Wildlife Service, Inventory & Monitoring (I&M) Program. “*Predicting the impact of storm waves and sea-level rise within the Papahānaumokuākea Marine National Monument (PMNM)*” \$89,500 (Principal Investigator)

2011-2013: US Fish and Wildlife Service, Arctic Landscape Conservation Cooperative. “*Modeling Arctic barrier island-lagoon system response to projected Arctic warming*” \$173,700 (Co-principal Investigator)

2010-2011: NOAA, Hawaiian Coral Reef Initiative Research Program. “*Impact of land-derived sediment on the coral reef ecosystem of Peleke Bay, Hawaii*” \$148,900 (Co-principal Investigator)

2010-2011: US National Park Service, Kalaupapa National Historical Park. “*Hydrography of Kalaupapa National Historical Park’s (KALA) coastal waters*” \$33,400 (Principal Investigator)

2009-2010: US Army Corps of Engineers’ Engineer Research and Development Center. “*Study of the fate of fine-grain sediment dredged from the Santa Cruz Harbor*” \$130,000 (Principal Investigator)

2008: David and Lucile Packard Science and Technology Endowment. “*Assessing the impacts of fire from watersheds to the nearshore ocean*” \$15,000 (Co-principal Investigator)

2007-2008: US National Park Service, War in the Pacific National Historical Park. “*Circulation and sediment dynamics in War in the Pacific National Historical Park’s (WAPA) coastal waters*” \$78,900 (Principal Investigator)

2005-2007: California Department of Boating and Waterways and Santa Cruz County Redevelopment Agency. “*Pleasure Point geologic and oceanographic processes study*” \$155,100 (Principal Investigator)

2005-2007: US National Park Service, Water Resources Division. “*Determining subterranean groundwater nutrient input to Kaloko-Honokohau National Historical Park’s (KAHO) coastal ocean ecosystem*” \$98,600 (Co-principal Investigator)

2004-2005: US National Park Service, Pacific Islands Coral Reef Program. “*Coastal circulation and water column properties at Kaloko-Honokohau National Historical Park (KAHO)*” \$98,700 (Co-principal Investigator)

2002-2005: US National Park Service, Submerged Cultural Resources Center. “*Dynamics of the physical environment at the USS Arizona Memorial (USAR)*” \$28,900 (Co-principal Investigator)

#### **SPECIALTY COURSES:**

- Delft3D Application short course, Delft Hydraulics, 2013

- Coastal Sediment Transport Processes, American Society of Civil Engineers, 2011
- Storm Processes, American Society of Civil Engineers, 2007
- MORPH Sediment Transport Model Application short course, Delft Hydraulics, 2007
- FLOW Hydrodynamic Model Application short course, Delft Hydraulics, 2005
- Leadership Intensive Course, US Geological Survey, 2004
- Water Wave Modeling short course, American Society of Civil Engineers, 2001
- SWAN Wave Model Application short course, Delft Hydraulics, 2001

#### **QUALIFICATIONS:**

- Master Scuba Diver with Advanced Open-water and Nitrox Certifications (NAUI)
- Scientific/Research Scuba Diver (AAUS, US-DOI); >500 scientific dives
- Class-A and Class-1 Motorboat Operator Certifications (US-DOI)
- First Aid, CPR-Pro, AED and DAN Oxygen Administration Certifications
- Basic Helicopter/Airplane Safety Certification (US-DOI)

#### **FIELD EXPERIENCE:**

[http://walrus.wr.usgs.gov/infobank/programs/html/scientists2idshtml/s/curt\\_storlazzi\\_ids.html](http://walrus.wr.usgs.gov/infobank/programs/html/scientists2idshtml/s/curt_storlazzi_ids.html)

#### **COLLABORATIONS:**

Since FY2000: 51 PhD researchers at 19 different institutions

Since FY2010: 32 PhD researchers at 12 different institutions

#### **POSTDOCTORAL SCIENTISTS ADVISED:**

Li H. Erikson, USGS Postdoctoral Scientist, 2009-2011, “Arctic Bluff Retreat and Inundation of an Ecologically Sensitive Barrier Island System Due to a Changing Global Climate” Funded by the USGS Mendenhall Program

Christopher H. Conaway, USGS Postdoctoral Scientist, 2008-2010, “Fluvial Deposition in the Coastal Ocean and its Impact on Nearshore Ecosystems” Funded by the USGS Mendenhall Program

#### **GRADUATE STUDENTS ADVISED:**

James Shope, University of California at Santa Cruz, “Predicting Potential Impacts of Sea-Level Rise on Pacific Island Atolls.” Ph.D. ongoing

Justin Rogers, Stanford University, “Spur and groove formations on coral reefs: hydrodynamic and geomorphic function” Ph.D. ongoing

Lynne Harden, University of California at Santa Cruz, “Predicting Potential Impacts of Sea-Level Rise on Sandy Beaches in California.” Ph.D. 2012

#### **GRADUATE STUDENT RESEARCH SUPPORT:**

Filippo Ferrario, Universita di Bologna (IT), “Ecosystem services and conservation: the role of coral reefs as an Ecosystem-Based Adaptation to coastal hazards.”

Bryson Robertson, University of Guelph (CA), “Assessing the impact of wave characteristics and bathymetric features on wave breaking shape and energy intensity”

Ronald Hoeke, James Cook University (AU), “Wave-driven circulation in a coral reef embayment”

Sean Vitousek, University of Hawaii (UH), “Model scenarios of shoreline change at Kaanapali Beach, Maui, Hawaii: Seasonal and extreme events.”

Eleyne Phillips, UCSC, “Geologic and oceanographic controls on rippled scour depressions offshore Huntington Beach, CA.”

Stacy Jupiter, UCSC, “Coral trace element records of terrestrial, agricultural and land-use change in a Great Barrier Reef catchment.”

Guy Marion, University of Queensland (AU), “Coral trace element records of historic terrestrial land use in Mackay Whitsunday, central Great Barrier reef”

Peter Adams, UCSC, “Nearshore wave-induced cyclical flexing of seacliffs.”

Kathy Presto, University of Washington, “Temporal and spatial variability in the flow and dispersal of suspended-sediment on a fringing reef flat, Molokai, Hawaii.”

Mary Engels, UH, “Holocene reef accretion: southwest Molokai, Hawaii.”

Johanna Rosman, Stanford University, “Field observations of the flow field in and around Giant Kelp (*Macrocystis pyrifera*) forests.”

Olivia Cheriton, UCSC, “Physical and biological controls on the maintenance and dissipation of a thin phytoplankton layer.”